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09/996,745	11/30/2001	Jakob Lichtenberg	0459-0686P	4472

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BIRCH STEWART KOLASCH & BIRCH  
PO BOX 747  
FALLS CHURCH, VA 22040-0747

EXAMINER

GEBRESILASSIE, KIBROM K

ART UNIT	PAPER NUMBER
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2128

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/996,745

Applicant(s)

LICHTENBERG ET AL.

Examiner

Kibrom K. Gebresilassie

Art Unit

2128

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/28/02 &amp; 2/10/05</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. This action is responsive to the application filed on November 30, 2001.
2. Claims 1-42 have been examined and rejected.

***Priority***

3. The priority date considered for this application is December 8, 2000.

***Oath/Declaration***

4. The Office acknowledges receipt of a properly signed oath/declaration filed on January 24, 2002 and August 10, 2004.

***Information Disclosure Statement***

5. The Office acknowledges receipt of the Information Disclosure Statements filed on February 28, 2002 and February 10, 2005. They have been placed in the application file and the information referred to therein have been considered.

***Claim Objections***

6. Claims 1-42 are objected to because of the following informalities: applicant used special bulletin such as "•, \* ". It is improper to use special characters in claims. Appropriate correction is required.

***Claim Rejections - 35 USC § 101***

7. 35 U.S.C. 101 reads as follows:

*Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.*

8. Claims 1-42 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. *The Examiner submits that Applicant's have not recited any limitations relating to a practical application in the technological arts and have merely claimed a*

*manipulation of abstract idea that is not tangibly embodied. Section 2106 [R-2] (Patentable*

*Subject Matter - Computer-Related Inventions) of the MPEP recites the following:*

*"In practical terms, claims define nonstatutory processes if they:*

- consist solely of mathematical operations without some claimed practical application (i.e., executing a "mathematical algorithm"); or*
- **simply manipulate abstract ideas**, e.g., a bid (Schrader, 22 F.3d at 293-94, 30 USPQ2d at 1458-59) or a bubble hierarchy (Warmerdam, 33 F.3d at 1360, 31 USPQ2d at 1759), **without some claimed practical application**."*

*An invention which is eligible for patenting under 35 U.S.C. § 101 is in the "useful arts" when it is a machine, manufacture, process or composition of matter, which produces a concrete, tangible, and useful result. The fundamental test for patent eligibility is thus to determine whether the claimed invention produces a **"useful, concrete and tangible result."** The test for practical application as applied by the examiner involves the determination of the following factors:*

*(1) "Useful" - The Supreme Court in Diamond v. Diehr requires that the examiner look at the claimed invention as a whole and compare any asserted utility with the claimed invention to determine whether the asserted utility is accomplished.*

*(2) "Tangible" - Applying In re Warmerdam, 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994), the examiner will determine whether there is simply a mathematical construct claimed, such as a disembodied data structure and method of making it. If so, the claim involves no more than a manipulation of an abstract idea and therefore, is nonstatutory under 35 U.S.C. § 101. In Warmerdam the abstract idea of a data structure became capable of producing a useful result when it was fixed in a tangible medium which enabled its functionality to be realized.*

*(3) "Concrete" - Another consideration is whether the invention produces a "concrete" result. Usually, this question arises when a result cannot be assured. An appropriate rejection under 35 U.S.C. § 101 should be accompanied by a lack of enablement rejection, because the invention cannot operate as intended without undue experimentation.*

The Examiner respectfully submits, under current PTO practice, that the claimed invention does not recite either a useful, concrete, or tangible result and is merely drawn to a manipulation of abstract ideas.

The claims are not **concrete** or **tangible**; since, the claims are refer to methods that manipulate the abstract idea defined by claim 1. Although claims 40-42 recite products such as computer program embodied on a computer readable medium, none of the embodiments permit the abstract idea or algorithm to result in a physical transformation outside the computer, nor are they limited to a practical application within the technological arts. Therefore, the claimed inventions are nonstatutory for three reasons:

- i. It is an abstract idea with no embodiment.
- ii. It is an abstract algorithm that only manipulates an abstract idea.
- iii. It is embodied on a computer readable medium but produces no concrete, tangible result.

#### ***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless –*

*(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.*

10. Claims 1,2,3,5, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,515,524 issued to Lynch.

**As per Claim 1:**

Lynch discloses a method of configuring a product comprising a number of components (col. 1 lines 10-13), the method comprising: providing, for each component, information relating to a group of alternatives for the component (col. 2 lines 17-20; col. 5 lines 63-66), defining rules relating to compatibilities between alternatives from different components (col. 1 lines 40-49), representing the rules in a Directed Acyclic Graph (Fig. 2) and iteratively configuring the product by repeatedly: choosing a component (derived classes 88; col. 9 lines 63-65; Fig. 3(1)), selecting an alternative from this component's group of alternatives (component types 90; col. 9 line 67), checking the DAG whether the alternative selected is compatible with other chosen alternatives from other components (col. 1 lines 40-42).

**As per Claim 2:**

Lynch discloses in which the iterative configuring is ended when an alternative is chosen for each component and when the chosen alternatives of the components are compatible (col. 14 lines 51-63).

**As per Claim 3:**

Lynch discloses using the DAG to determine, for at least one of the components (power supply 80; Fig. 3(1)), a subset of alternatives for the component (300 Watt and 500 Watt; Fig. 3(1)), so that each of the alternatives in the subset is compatible with the chosen alternatives from the other components (col. 1 lines 40-42), and providing this information to a user (col. 30 lines 34-36).

**As per Claim 5:**

Lynch discloses the steps of choosing a component and the alternative further comprise, for each of the components: using the DAG to check which of the alternatives of the component that are compatible with at least one of the chosen alternatives of each of the other components, providing a user with this information (col. 30 lines 34-36), allowing the user to

select one of the alternatives that were compatible with at least one of each of the other component's chosen alternatives (col. 27 lines 59-58-67; col. 28 lines 1-4).

**As per Claim 6:**

Lynch discloses selecting or defining a subgroup of alternatives to the chosen component, checking the DAG for which of the alternatives in the subgroup that are compatible with chosen alternatives from other components (col. 1 lines 40-43), and providing information relating to which of the alternatives in the subgroup are compatible with chosen alternatives of other components (col. 30 lines 34-40).

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

*(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.*

12. Claims 4 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,515,524 issued to Lynch as applied to claims 1,2,3,5, and 6 above, and further in view of U.S. Patent No. 6,430,531 issued to Polish.

**As per Claim 4:**

Lynch discloses the claimed elements of independent claims 1,2,3,5, and 6 as previously cited above.

Lynch fails to disclose providing a system with a speech synthesizer and the providing of information to a user further comprises providing the information by speech generated by the speech synthesizer.

Polish discloses providing a system with a speech synthesizer (Fig. 1 element 117) and the providing of information to a user further comprises providing the information by speech generated by the speech synthesizer (col. 3 lines 38-40).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Lynch related to configuring a product based on their compatibility and non compatibility with the teachings of Polish related to allow a user to engage in a verbal dialog with a database. The motivation for doing so would have been more convenient to a user to engage in a verbal dialog with a database at the time of configuring a product (abstract). Hence a skilled artisan having access to the teaching of Lynch and Polish would have knowingly modified the teaching of Lynch with Polish.

**As per Claim 35:**

Polish discloses providing a system with a speech recognizer (Fig. 1 element 103), and wherein the step of iteratively configuring the product further comprises choosing a component from a text recognized by the speech recognizer (col. 3 lines 26-29); and selecting an alternative from this component's group of alternatives from a text recognized by the speech recognizer (col. 3 lines 26-29).

13. Claims 7- 9, 24, 25, 32-34, 36-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,515,524 issued to Lynch as applied to claims 1,2,3,5, and 6 above, and further in view of U.S. Patent No. 6,167,383 issued to Henson.

**As per Claim 7:**

Lynch fails to disclose at least once, defining information relating to limiting the alternatives of at least one of the components, and checking the DAG for which of the alternatives of the components is compatible with the limiting information.



Henson discloses at least once, defining information relating to limiting the alternatives of at least one of the components, and checking the DAG for which of the alternatives of the components is compatible with the limiting information (col. 9 lines 1-8).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Lynch related to configuring a product based on their compatibility and non compatibility with the teachings of Henson related to a web-based online store which include a configurator that provide user to configuring a product based on a user input. The motivation for doing so would have been more convenient to a user to find out whether the selected components are compatible with other components before placing an order. This information of compatible or non-compatible of components can help the user to save time and execute his/her order accordingly. Hence a skilled artisan having access to the teaching of Lynch and Henson would have knowingly modified the teaching of Lynch with Henson.

**As per Claim 8:**

Henson discloses the iterative configuring is ended upon request from a user (Fig. 6 element 106), and information is provided relating to all possible compatible products comprising at least one chosen alternative for each of the products for which an alternative is chosen (Fig. 3A element 75), and this information is provided to the user.

**As per Claim 9:**

Henson discloses the steps of obtaining a number of all possible compatible products comprising at least one chosen alternative for each of the products for which an alternative is chosen, and providing this information to the user (col. 9 lines 4-8).

**As per Claim 24:**

Henson discloses if the selected alternative is not compatible with other chosen alternatives, providing information relating to other chosen alternatives which are not compatible with the selected alternative, and providing this information to a user (col. 8 lines 22-27; Fig. 4 element 86).

**As per Claim 25:**

Henson discloses obtaining, by querying a database, information relating to alternatives relating of one or more components and/or information relating to compatibility between two or more alternatives to different components, and building one or more rules from the information obtained from the database (Abstract 15-18; col. 7 lines 46-53).

**As per Claim 32:**

Henson discloses identifying a user, performing the step of selecting an alternative of a component by the user through communication between a device controlled by the user and another device where the iterative configuration is performed, transmitting information relating to the checking of the DAG to the user (col. 5 lines 55-67; col. 6 lines 1-4; Fig. 1 and Fig. 2).

**As per Claim 33:**

Henson discloses identifying a user, prior to the iterative configuring: transmitting the DAG to a device controlled by the user, performing the iterative configuring on the user's device (col. 6 lines 18-30).

**As per Claim 34:**

Henson discloses obtaining information relating to one or more alternatives for components for which no alternatives have been chosen, each of the one or more alternatives being compatible with the chosen alternatives, and providing the user with this information (col. 9 lines 4-6).

**As per Claim 36:**

Henson discloses identifying a configurable device (Fig. 1 element 18) and an interface device (Display 42; col. 6 line 2; Fig. 2 element 42), and storing the DAG representing the rules on the configurable device, uploading the DAG from the configurable device to the interface device, and in the step of iteratively configuring the product, performing the checking of the DAG whether the alternative selected is compatible with other chosen alternatives from other components on the interface device (Abstract).

**As per Claim 37:**

Henson discloses identifying a list of predetermined components in the configurable device and identifying a list of predetermined alternatives for these components in the configurable device (Fig. 5 element 92), and wherein the step of iteratively configuring the product further comprises performing the checking of the DAG whether the alternative selected is compatible with other chosen alternatives from other components and compatible with the predetermined alternatives on the interface device (col. 7 lines 57-66).

**As per Claim 38:**

Henson discloses identifying a list of observer components and a list of non-observer components (col. 9 lines 1-6),

**As per Claim 39:**

Henson discloses for each pair of component and alternative providing a classification of the state of the pair, adopting the classification to one of a list of outcomes comprising blocked (col. 9 lines 1-4), selectable (Fig. 5 element 92), user selected (col. 9 lines 13-16), system selected (col. 9 lines 4-6), or forceable, providing a classification of blocked when the alternative cannot be chosen for the component even without considering choices of alternatives for other components (col. 9 lines 1-4), providing a classification of selectable when the alternative for the component is compatible with the chosen alternatives from the other

components (Fig. 5 element 92), providing a classification of user selected when the alternative has already been chosen for the component (col. 9 lines 13-16), providing a classification of system selected when the alternative is the only choice for the component that is compatible with the chosen alternatives from the other components and the alternative has not been chosen by the user (col. 9 lines 4-6), providing a classification of forceable when the alternative can be chosen for the component but is incompatible with some of the other choices of alternatives of the other components, and providing information on the classification to a user.

**As per Claim 40:**

The limitation of claim 40 has already been discussed in the rejection of claim 1. It is therefore rejected under the same rationale.

**As per Claim 41:**

Henson discloses a computer-readable medium (floppy disk; col. 6 lines 12).

**As per Claim 42:**

The limitation of claim 42 has already been discussed in the rejection of claim 40. It is therefore rejected under the same rationale.

14. Claims 10-23, 26-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,515,524 issued to Lynch and U.S. Patent No. 6,167,383 issued to Henson as applied to claims 1- 9, 24, 25, 32-34, 36-42 above, and further in view of "An Introduction to Binary Decision Diagrams" Lecture notes for 49285 Advanced Algorithms E97, October 1997, by Henrick Reif Andersen.

**As per Claim 10:**

Lynch and Henson fail to disclose a mathematical expression having a plurality of possible disjoint outcomes and a number of pointers corresponding to the number of possible outcomes of the expression, wherein: a pointer of at least one of the nodes points to another of

Art Unit: 2128

the nodes, a pointer of at least one of the nodes points to one of the at least one terminal node, and at least one of the nodes being a top-most node from which one or more paths are defined from a top-most node to one of the at least one terminal node via one or more of the nodes and the pointers thereof, each node being part of at least one path.

Andersen discloses a mathematical expression having a plurality of possible disjoint outcomes and a number of pointers corresponding to the number of possible outcomes of the expression (Fig 10a), wherein: a pointer of at least one of the nodes points to another of the nodes, a pointer of at least one of the nodes points to one of the at least one terminal node, and at least one of the nodes being a top-most node from which one or more paths are defined from a top-most node to one of the at least one terminal node via one or more of the nodes and the pointers thereof, each node being part of at least one path (Fig. 10g).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Lynch related to configuring and providing a user with the information of compatibility or non compatibility of a selected components or products with the teachings of Andersen related to mathematical expression having a number of pointers and terminal nodes with the number of possible outcomes of the expression. The motivation for doing so would have been more convenient to compute or configure complex products composed of several parts. Hence a skilled artisan having access to the teaching of Lynch and Andersen would have knowingly modified the teaching of Lynch with Andersen.

**As per Claim 11:**

Andersen discloses providing one or more of the nodes with mathematical expressions each comprising a mathematical operator, each operator describing how the rules represented by the nodes pointed to by the pointers of the pertaining node are to be combined in order to

Art Unit: 2128

represent the combined set of rules (Fig. 10a).

**As per Claim 12:**

Andersen discloses the mathematical expression of which is a Boolean expression  
( $x/0/1/\neg l/l \wedge l/l \vee l/l \Rightarrow l// \Leftrightarrow l$ ; page 6).

**As per Claim 13:**

Andersen discloses a mathematical expression which is a variable (*The classical calculus for dealing with truth values consists of Boolean variables  $x, y, \dots$* ; page 6 line 1).

**As per Claim 14:**

Andersen discloses the mathematical expressions of which are ordered according to a given ordering such that, for each node, the expression of the actual node is of a lower order than the expressions of any nodes pointed to by the pointers of the actual node

( $x_1 < x_2 < x_3 < x_4$ ; Page 16);

**As per Claim 15:**

Andersen the steps of: identifying a first and a second node having the same expression and the pointers of which point to the same nodes, and having pointers pointing to the first node point to the second node ( $x_1$  and  $x_2$ ; Fig. 7, Fig. 10g)

**As per Claim 16:**

Andersen discloses representing each rule as a logical expression, from each logical formula constructing a partial DAG representing the set of possible solutions to the formula, constructing the DAG representing all the rules from the partial DAGs representing each of the logical formulas (Fig. 10a).

**As per Claim 17:**

Andersen discloses the step of providing the information relating to the alternatives for each component comprises: selecting Boolean variables for representing the individual

Art Unit: 2128

alternatives of the component, providing an encoding for each of the alternatives of the component as a combination of Boolean values for the Boolean variables (x1, x2, and x3; Fig. 10g).

**As per Claim 18:**

Andersen discloses the step of representing each rule as a logical formula/expression comprises providing the Boolean variables relating to the alternatives to which the rule relates and interrelating the variables in accordance with the rule (page 6).

**As per Claim 19:**

Andersen discloses providing at least one type of terminal node and wherein, for each path comprising a such terminal node, the combination of all expressions and all pertaining outcomes relating to the pointers of the path relate to either compatible products or non-compatible products (Fig. 10g).

**As per Claim 20:**

Andersen discloses providing a first and a second type of terminal nodes, and wherein: for each path comprising a terminal node of the first type (1; Fig. 10g), the combination of all expressions and all pertaining outcomes relating to the pointers of the path relate to a compatible product, and for each path comprising a terminal node of the second type (0; Fig. 10g), the combination of all expressions and all pertaining outcomes relating to the pointers of the path relate to a non-compatible product.

**As per Claim 21:**

Andersen discloses the first type of terminal node is adapted to represent "true", "one" or "1", and wherein the second type of terminal node is adapted to represent "false", "zero" or "0" (*Each subexpression can be viewed as the node of a graph. Such a node is either terminal*

*in the case of the constants 0 and 1, or non-terminal; page 10 first paragraph lines 1-2; Fig. 2).*

**As per Claim 22:**

Andersen discloses representing each rule as a logical expression, from each logical formula constructing a partial DAG representing the set of possible solutions to the formula, constructing the DAG representing all the rules from the partial DAGs representing each of the logical formulas, the step of providing the information relating to the alternatives for each component comprises: selecting Boolean variables for representing the individual alternatives of the component, providing an encoding for each of the alternatives of the component as a combination of Boolean variables, and the step of selecting an alternative comprises: identifying Boolean variables relating to the other alternative(s) of the component and nodes comprising expressions relating to such other alternative(s), and in the DAG, identifying paths comprising such nodes and altering any terminal node(s) thereof of the first type to terminal node(s) of the second type (Fig. 10).

**As per Claim 23:**

Andersen discloses computing of the number of possibilities of different choices is performed by the following steps applied to the DAG and for each top-most node: starting from the topmost node and iteratively finding the number of possibilities represented by the actual node, by performing the steps of: if the node is a terminal node, providing a "1" if the terminal node is of the first type and a "0" if it is of the second type, else: finding the number of possibilities represented by each node pointed to by a pointer of the actual node, and therefrom computing the number of possibilities represented by the node (Fig. 2).

**As per Claim 26:**

Andersen discloses a two-dimensional table having, in each of a plurality of rows thereof, information relating to a product comprising an alternative from each component, the



Art Unit: 2128

alternatives being compatible, wherein the step of providing a rule comprises providing a rule relating to the information of each row, and wherein the step of representing the rules in the DAG comprises providing a disjunction of the rules (page 6 Fig. 1).

**As per Claim 27:**

Andersen discloses the step of checking the DAG whether an alternative is compatible comprises searching the DAG for a path from a topmost node to a terminal node, the search comprising: starting with the top-most node as an actual node, iteratively, until the actual node is a terminal node: evaluating the mathematical expression in the actual node and determining the outcome thereof in view of the alternatives chosen from other components, selecting the pointer of the node representing the outcome, selecting, as the actual node, the node pointed to by the selected pointer, providing information relating to the chosen alternatives, and the information relating to the path represents that the choices are compatible (Fig. 10).

**As per Claim 28:**

The limitation of claim 28 has already been discussed in the rejection of claims 20 and 27. It is therefore rejected under the same rationale.

**As per Claim 29:**

Andersen discloses the terminal nodes represent either "true" or "false", the information of a path relating to the identities of the variables in the mathematical expression(s) of the node(s) of the path and values or dependencies thereof, the identities and values/dependencies relating to chosen alternatives of components, the chosen components being compatible if the terminal node of the path represents "true" and the chosen components being incompatible if the terminal node of the path represents "false" (Page 14 a paragraph starting with "An immediate consequence is the following ....").

**As per Claim 30:**

Art Unit: 2128

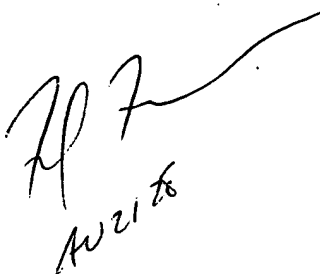
Lynch discloses representing the rules in an actual DAG, selecting at least one of the components to be hidden (col. 16 lines 59-64).

**Conclusion**

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

16. Any inquiring concerning this communication or earlier communication from the examiner should be directed to Kibrom K. Gebresilassie whose telephone number is (571) 272-8571. The examiner can normally be reached on Monday-Friday, 8:30 am to 4:30 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner supervisor, Jean R. Homere can be reached at (571) 272-3780. The official fax number is (703) 872-9306. Any inquiring of a general nature relating to the status of this application should be directed to the group receptionist whose telephone number is (571) 272-3700.

Kibrom K. Gebresilassie  
Patent Examiner  
U.S. Patent and Trademark Office  
Simulation and Emulation, Art Unit 2128  
401 Dulany St., Room 5D11 (Randolph)  
Alexandria, VA 22314-5774  
Tel: 571-272-8571  
Kibrom.gebresilassie@uspto.gov



Handwritten signature of Kibrom K. Gebresilassie, with the date "10/21/06" written below it.